

Atty. Docket No. 17312**Claims****We claim:**

1. An engine hood with integral air conduit for a tractor, the tractor having a forwardly facing generally vertical radiator, an internal combustion engine disposed directly behind the radiator, and cooling fan for pulling air through the radiator that is disposed between the radiator and the engine, the hood comprising:
 - an outer shell, including
 - a planar top panel having an inner engine-facing surface and defining a combustion air aperture therethrough, said top panel being configured to be disposed above the engine and the radiator, said combustion air aperture having at least a rear portion that is disposed behind the radiator and above the radiator,
 - a vertical front panel coupled to the top panel and configured to extend vertically in front of the radiator and the engine, said front panel defining a cooling air aperture therein,
 - a vertical left side panel coupled to the top panel and the front panel and configured to extend down the left side of the engine, and
 - a vertical right side panel coupled to the top panel and the front panel and configured to extend down the right side of the engine,
 - wherein the top panel defines a combustion air aperture configured to conduct combustion air through the top panel, and further wherein at least a portion of the combustion air aperture is located behind the radiator; and
 - an inner panel that is fixed to the inner surface of the top panel to direct air passing through the rear portion of the combustion air aperture forward to the front of the radiator.
2. The engine hood of claim 1, wherein the inner panel and the top panel define a cooling air conduit therebetween to direct the combustion air forward from behind and above the radiator to the front of the radiator.

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3. The engine hood of claim 2 wherein the inner panel has a rear edge, a left side edge and a right side edge that abut the outer shell, and further wherein the inner panel has a forward edge that abuts the radiator.

4. The engine hood of claim 3, wherein the inner panel is disposed to block radiator exhaust airflow from passing from the rear of the radiator to the front of the radiator over the top of the radiator.

5. The engine hood of claim 4, wherein the inner panel abuts the hood and the radiator such that substantially all air passing through the combustion air aperture is directed toward the front of the radiator.

6. The engine hood of claim 5, wherein the inner panel sealingly abuts a combustion air intake tube that extends over the top and toward the front of the radiator.

7. A hood for a work vehicle that defines an integral air channel, the work vehicle having a generally vertical radiator, an internal combustion engine disposed behind the radiator, and cooling fan disposed between the radiator and the engine to pull cooling air therethrough, the hood comprising:

an outer enclosure, including

a planar top wall having an inner engine-facing surface that defines an air transmitting aperture therethrough, said top wall being disposed above the engine and the radiator, said air transmitting aperture having a rear portion that is disposed both horizontally behind the radiator and vertically above the radiator,

a vertical front wall coupled to the top wall and configured to extend vertically in front of the radiator and the engine, said front wall defining a cooling air aperture therein,

a vertical left side wall coupled to the top wall and the front wall and configured to extend down the left side of the engine, and

a vertical right side wall coupled to the top wall and the front wall

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and configured to extend down the right side of the engine; and

an inner panel that is fixed to the inner surface of the top wall to direct air passing through the rear portion of the air transmitting aperture forward to the front of the radiator.

8. The hood of claim 7, wherein the inner panel and the top wall define a cooling air channel therebetween to direct combustion air passing through the air transmitting aperture horizontally forward from behind to in front of the radiator.

9. The hood of claim 8 wherein the inner panel abuts the outer enclosure along its rear edge, its left side edge and its right side edge, and further wherein the inner panel has a forward edge that abuts the radiator.

10. The hood of claim 9, wherein the inner panel is disposed to block exhaust airflow from the radiator air outlet over the top of the radiator to the radiator air inlet.

11. The hood of claim 10, wherein the inner panel abuts the hood and the radiator such that substantially all air passing through the combustion air aperture is directed toward the front of the radiator.

12. The hood of claim 11, wherein the inner panel sealingly abuts a combustion air intake tube that extends from behind the radiator over the top of the radiator.

13. A vehicle hood for a vehicle having a forwardly facing vertical radiator, an internal combustion engine disposed behind the radiator, and cooling fan disposed between the radiator and the engine to pull cooling air through the radiator, the hood comprising:

an outer shell, including

a top panel having an inner surface and defining an air aperture

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therethrough, said top panel being disposed above both the engine and the radiator, said air aperture having a rear portion that is disposed behind the radiator and above the radiator, and a front portion that is disposed vertically above and horizontally in front of the radiator,

a forward facing panel coupled to the top panel and configured to cover the front of the radiator, said forward-facing panel defining a cooling air aperture therein for conducting engine cooling air into the air inlet of the radiator,

a left side panel coupled to the top panel and the forward-facing panel that extends down the left side of the engine, and

a right side panel coupled to the top panel and the forward-facing panel that extends down the right side of the engine; and

an inner panel that is fixed to the inner surface of the outer shell and abuts the top of the radiator to direct air passing through the rear portion of the air aperture forward to the front of the radiator.

14. The engine hood of claim 13, wherein the inner panel and the top panel define a cooling air path therebetween to direct the combustion air forward from behind and above the radiator to the front of the radiator.

15. The engine hood of claim 14 wherein the inner panel abuts the hood along its rear edge its left side edge and its right side edge, and further wherein the inner panel has a forward edge that abuts the radiator.

16. The engine hood of claim 15, wherein the inner panel is disposed to block radiator exhaust airflow from passing from the rear of the radiator to the front of the radiator over the top of the radiator.

17. The engine hood of claim 16, wherein the inner panel abuts the hood and the radiator such that substantially all air passing through the combustion air aperture is directed toward the front of the radiator.

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18. The engine hood of claim 17, wherein the inner panel sealingly abuts a combustion air intake tube that extends over the top of the radiator and toward the front of the radiator.